

Philadelphia 1793: Yellow Fever, Race, Medicine and Politics

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Overview

This curriculum unit will examine Philadelphia in the year of 1793. Philadelphia was the capital of the United States, the center of politics of the day. Immigrants were pouring into the city of “brotherly love.” George and Martha were living in Robert Morris’ mansion, a short distance from the more crowded, filthy streets of the bustling port city. The French Revolution and its politics were felt in the city with its large French population. The esteemed Dr. Benjamin Rush was teaching his students at the University of Pennsylvania and discussing public education with Noah Webster. Then there was the deadly illness that spread through the city like wild fire. The year of 1793 and its yellow fever epidemic would forever change Philadelphia.

In Philadelphia, 1793, the debate over the cause and cure of yellow fever dominated all else. Benjamin Rush, signer of the Declaration of Independence, was the leader of the medical profession and the first American physician to gain international recognition. It was his reputation, buttressed by his distinguished colleagues of the medical school of the University of Pennsylvania, which attracted students from all over. With the American Philosophical Society publications, the young nation looked to Philadelphia for the latest reports on scientific and technological development. Yet, only one event dominated all else in Philadelphia throughout most of 1793, a yellow fever epidemic.

In the middle of the summer of 1793, people started dying in unusual numbers. At first only the poor living closest to the river were affected. It was not until the wealthier Philadelphians started to die that those in power took note. The doctors were quick to recognize the plague as yellow fever, but they had no idea what caused it. Miasma, a poisonous vapor in the atmosphere from decaying matter that was believed to promote disease, the refugees from Santo Domingo, and filth were among the causes suggested. In the end, they concluded that the epidemic was carried to Philadelphia aboard a ship from the West Indies. Philadelphia had no sanitary inspections of vessels arriving at its port, nor quarantine arrangements. As the disease spread, at first dozens, then hundreds, died. Anyone of means fled the city of Philadelphia. President Washington and most of

the new government officials administered the affairs of the nation from outside Philadelphia, in Germantown.

A Committee headed by Mayor Matthew Clarkson and including merchant Stephen Girard, the publisher Mathew Carey, and others stayed in town and managed civic affairs. They established a hospital at the Hamilton estate of Bush Hill and tried to maintain order in chaos. By December 1793, five thousand people died in what has been called the worst health disaster ever to befall an American city.

The black community in Philadelphia provided the manpower to do what others did not want to do: collect and bury the dead. Reverend Absalom Jones, founder of St. Thomas's African Episcopal Church, and Reverend Richard Allen, founder of Mother Bethel AME Church, were important leaders who volunteered and helped the white community during the crisis. In the early and middle stages of the epidemic it appeared that the black population was immune from yellow fever. Thus, they did not leave the city.

Dr. Benjamin Rush remained in Philadelphia and treated hundreds with his only method of healing, bleeding and purging. While his treatment was useless, his presence in the city was heartening. He was heroic in his caring of the sick. There were other physicians who favored a milder treatment than that given by Dr. Rush—fresh air, a mild diet, and rest—and seemed more successful. In any case, with the cold weather of autumn, the fever abated. The Yellow Fever Epidemic of 1793 was filled with horror, intrigue, powerful players and politics.

I chose to focus on this event in American history because my students live in Philadelphia and, of course, with this horrific event, I would easily capture their interest. I also felt that the period between the establishment of the Constitution and the Lewis & Clark Expedition is an empty space in the American history textbook. Students know little about government and social affairs/events of the last decade of the eighteenth century, a time when the new nation was still being established.

The unit is designed for fifth and eighth grade students who are studying American history. It could also be used with fourth grade students studying Philadelphia history. The curriculum will examine the catastrophe, important Philadelphia leaders, medical/health views of the time period, the important role of African Americans and other minority groups, and the political ramifications of the yellow fever epidemic in the most cosmopolitan city of the era. There is also a strong emphasis on using primary source documents in their understanding of this historic event. Students will use maps, charts, lithographs, newspaper articles, diary entries, public documents, and paintings to explore this topic. It is a unique opportunity for students to study an extraordinary time in American history.

Rationale

“This afternoon we were agreeably surprised by the arrival of H.D. My Husband informs of the death of Reuben Haines Senr, who died this morning rather suddenly—many have gone off within these few days. A Fever prevails in the City, particularly in Water St. between Race and Arch Sts. Of ye malignant kind; numbers have died of it. Some say it was occasioned by damaged Coffee and Fish, which were stored at Wm. Smiths’; others say it was imported in a Vessel from Cape Francois, which lay at our wharf, or at ye wharf back of our store. Doctor Hutchinson is ordered by ye Governor to enquire into ye report. He found, as ‘tis said, upwards of 70 persons sick in that square of different disorders; several of this putrid or bilious fever. Some are ill in Water St. between Arch and Market Sts., and some in Race Street. ‘Tis really alarming and serious time.”

Elizabeth Drinker, August 23, 1793

Yellow Fever is a mosquito-borne viral disease that occurs in tropical and subtropical areas. The symptoms are a “black vomit” caused by bleeding into the stomach, hemorrhages, fever, backache, headache, and yellow skin. As the disease progresses, the pulse slows and weakens, and there is bleeding of the gums and blood in the urine. The disease can affect either gender, and all ages and races. Symptoms occur within three to six days after exposure. People who have had yellow fever, and survive, develop a lifelong immunity to the disease. Most victims usually died within several days of the symptoms.

Philadelphia was the major port in the United States. Ships from the Caribbean arrived regularly. In late spring, early summer of 1793, yellow fever had been raging through the West Indies. Many French refugees arrived in Philadelphia from Santo Domingo, fleeing a bloody slave rebellion. Ships arrived at the Philadelphia wharves without sanitary inspection or quarantine. The onset of the epidemic has been traced to late July, along Water Street, near the docks. Philadelphia was the largest and most cosmopolitan city in the United States but its sanitary conditions were deplorable. The flies and mosquitoes swarmed around the dock area near the stagnant water. In fact, the conditions that spring and early summer, hot and dry, along with the millions of mosquitoes, provided the perfect “storm” that spread the disease quickly. However, it was not until August that the epidemic attracted attention from its the citizens and officials of the city.

The first official recognition that yellow fever was rampant in Philadelphia was by the mayor, Matthew Clarkson, on August 22. Four days later prominent physicians of the city united in an address to the public defining the nature of the disease. They recommended measures of precaution and proper remedies for the treatment of the disease. When the people began to realize the alarming and deadly consequences of the disease, a panic ensued, and by August 25 a general exodus of the population began. Most Philadelphians, with the exception of the poor, along with members of Congress, President Washington and his Cabinet, abandoned the city. Germantown became the

location of the capital during this summer of 1793. The President lived part of the time in Germantown while Jefferson, it is said, fled to the King of Prussia Tavern, further from the city. During the months of August and September, an estimated 17,000-20,000 persons left the city. Mayor Matthew Clarkson, remained as did Dr. Benjamin Rush and many of his medical colleagues, along with Stephen Girard, a Philadelphian who would become the wealthiest man in America.

Yellow fever was first diagnosed on August 5, 1793. Internationally known physician Benjamin Rush was called to the house of a fellow physician, Dr. Hugh Hodge, to examine Dr. Hodge's young daughter. Her skin had turned yellow and within two days she died. Interestingly, the good doctor's family lived on Water Street. Then, shortly thereafter, Dr. Rush was called to the home of Mrs. Peter LeMaigre on Water Street, located near Ball's Wharf on the Delaware River. Almost immediately Dr. Rush declared that the cause of the disease was the rotting coffee on the wharf. He demanded that the streets of Philadelphia be cleaned. Much talk ensued as to how trash should be disposed of and the mayor invoked an old ordinance requiring homeowners to sweep their walks and gutters. This was all well and good, but, in fact, Dr. Rush's treatment of yellow fever victims may have caused them their demise. All the while, the mosquitoes multiplied in the stagnant rainwater of the hot, wet, and humid summer.

This was not the first time Philadelphia, or any port city along the Atlantic coast, had seen yellow fever. This was, however, the worst epidemic ever known in the United States. The citizens of the city looked to the esteemed Dr. Rush for help. Benjamin Rush, medically trained in London and Edinburgh, founder and teacher at the College of Physicians, believed in only one treatment, "bleeding and purging." On September 11, 1793, Rush published his prescribed treatment for the disease in the city's newspapers. At the onset of pain, nausea, chills or fever, the patient should use a laxative "every six hours until the bowels had been amply evacuated several times... drink fluids and lie in bed sweating. Once the bowels had been thoroughly cleansed, and if the pulse were rapid and full, the patient should be bled of eight or ten ounces, more if the pulse were strong enough. This basic regimen was to be accompanied by a light diet, fresh air, blisters on the sides of the body, and continued cleanliness of the body and intestines."¹

There was great outcry against this procedure by the public and newspaper publishers. Nevertheless, Rush was not for want of patients with yellow fever. As for newspapers, by the end of the summer all newspapers but one, Andrew Brown's *Federal Gazette*, ceased publishing their daily newspapers. They, too, fled from Philadelphia and the yellow fever epidemic.

There were other physicians in the city that suggested another, less aggressive and more conventional treatment. Dr. William Currie proposed mild doses of medicinal barks and restorative liquids. The French physician David Nassy used a mild treatment and is said to have lost only a few patients to the plague compared to Benjamin Rush. However, it was another French doctor, Jean Deveze, who became a hero during this time. He had arrived from Santo Domingo the summer of 1793. He had had much experience with the disease in the West Indies.

Dr. Jean Deveze's treatment was considerably more humane than Rush's. "Small amounts of sweetened wine would be given to a patient to stimulate the blood...for nourishment patients were given broth, creamed rice...Let the body do its own healing...clean up the patient and sickroom to remove noxious odors. Provide tea and broth and nontoxic medicine to help the body fight off the fever."² Deveze himself had had yellow fever from a previous epidemic in the Caribbean and thus was immune. Rush, Girard, Clarkson, and other prominent people who remained in the city contracted the disease and they, too, survived.

The focal point of the epidemic, during August and September, was Bush Hill Mansion Hospital, a quarantine center established by the city under the capable mayor, Matthew Clarkson. Bush Hill was the unoccupied mansion of Andrew Hamilton. He was in London, his mansion was on the outskirts of the city, and it was illegally taken over by the city to house the poor, indigent citizens who had contracted yellow fever. Stephen Girard and little known citizen, Peter Helm, had volunteered to manage Bush Hill on September 16. This was good news to Philadelphia, for everyone was in despair as President Washington had left the city five days earlier.

Stephen Girard was in charge of the inside management of Bush Hill, nursing the sick, ordering supplies, cleaning the facility and executing general administrative duties. Helm supervised the grounds and outbuildings. He was responsible for receiving and burying the dead, cleaning the sanitary facilities, and providing quarters for the staff. They were provided with funds for supplies from the city. All the while, what of the premier hospital in Philadelphia, Pennsylvania Hospital? It should be noted "throughout the siege the Pennsylvania Hospital tried to protect its patients from infection by banning yellow fever victims."²

Mayor Clarkson had created a "Committee" that volunteered to "oversee the poor, the starving, and the sick, to transport victims to Bush Hill, to give relief"³ to the city during this disastrous time. They obtained a loan of \$1500 from the Bank of North America to appropriate funds for supplies and wages. Citizens made financial contributions, including Stephen Girard. As Bush Hill was set up, simultaneously the Committee organized a food, clothing and medicine distribution effort to aid the poor who remained in the city. They also set up an orphanage for the hundreds of children without parents. The most gruesome task, without doubt, was collecting the abandoned corpses en masse and burying them. Clarkson's guidance and visibility were, by all accounts, not to be underestimated. He had been elected just a year earlier and would then serve for three successive terms as a result of his bravery.

During the early months of the Yellow Fever Epidemic of 1793 it appeared to Dr. Rush that most African American in Philadelphia were immune from the disease. In fact, by September they, too, were impacted as greatly as the white population. Nevertheless, Dr. Rush asked the Free African Society, started in 1787 as a society of blacks helping other blacks in need, to assist with their ill & dying white neighbors. Prominent leaders of the black community, Absalom Jones and Richard Allen, agreed. The Free African Society provided a variety of services to the white community during the epidemic: nursing,

washing, cleaning, collecting the dead, and burying the dead. At first the services were free and then, as the epidemic took a larger toll on the city, and as thousands fled, the workers, white & black asked for a fee for their services. Mayor Clarkson agreed to this arrangement as the city was in need of workers.

After the epidemic passed, in November 1793, publisher Mathew Carey published *A Short Account of the Malignant Fever, Lately Prevalent in Philadelphia*. This book was distributed widely and became quite popular. In it, Carey attacked the services of the black community. He accused them of extortion, theft of property in homes in which they serviced, and overall publicly vilified them. He condemned them for taking money for their services at such a disastrous time. He spoke nothing of white citizens who did the same.

Richard Allen and Absalom Jones responded with their own publication in January 1794: *A Narrative of the Proceedings of the Black People, During the Late Awful Calamity in Philadelphia. In the Year 1793: and a Refutation of Some Censures, Thrown upon Them in some Late Publications*. This publication is the first published document by African Americans responding in defense of themselves and their community. They directly and publicly confront their accuser. They respond to every negative account of blacks in Carey's publication, systematically and emphatically.

The political arena in Philadelphia earlier in the year of 1793 was lively and raucous. Philadelphia had become obsessed with the French, politically and socially. The city seemed to be under the complete influence of Paris. Men and women of respectable social standing wanted the latest French clothing and even began assuming French manners. Philadelphia actually had a large French colony living on Front Street from Spruce to Pine Streets. Many were exiles from France and its colonies in the Caribbean. These supporters of the French Revolution took to the streets with demonstrations. They wanted sympathy for their Revolution and they wanted the new United States government to support their cause. This was not to be. In fact, Philadelphia, like Paris, was on the verge of a great political upheaval.

In James Dickerson's account of the political climate of 1793, he notes "also filling the newspapers were political debates about the cause of the epidemic. Republicans maintained that the disease was caused by local factors, while Federalists blamed the ships that arrived from foreign ports, and Federalists used the disease as an excuse to block trade with the French, especially as it applied to goods imported from French-controlled islands. Republicans interpreted the Federalist position as an attack against their right to trade with the West Indies."⁴

The heated and sometimes violent disagreements between the Federalists and the Republicans during this disastrous summer included social and medical issues. Philadelphia's new Irish, British, French and other immigrants supported the French Revolution. The Federalists, consisting of many New Englanders and southern plantation owners, a rather "patrician" group, disliked the urban capital of Philadelphia. They hated the diversity, the congestion, the filth and decay of urban living, and the French

Revolution. They were pleased to assist the British any way they could. In fact it was primarily the Republicans who dominated the relief work during the summer of 1793. Federalists most often joined the ranks of the refugees.

Not surprisingly, religion wove itself into politics during the yellow fever epidemic. A religious Republican viewpoint was that yellow fever was God's response for all of the sins the city had committed. They appealed to the urban population to change their ways so that good health would come back to Philadelphia.

The Federalists opposed Benjamin Rush and his colleagues in the medical community. "Rush identified the Federalist criticisms of his cures with the French Revolution, comparing his situation to that of the French Republic, surrounded and invaded by new as well as old enemies, without any other allies. He maintained that the cure for yellow fever would be determined by the will of the majority and not by political elitists."⁵ In the end, the yellow fever epidemic helped abate the violence that was escalating in the spring of 1793 between the two political parties. The Federalists did get their wish, probably as a result of the continuous yellow fever epidemics in Philadelphia, of the capital city moving to a quiet, rural location, to be called Washington, D.C.

By the end of the outbreak, over 5000 people, one-tenth of the population of Philadelphia, were dead and nearly 200 children were orphaned. This epidemic and others that followed in the 1790s, brought about the first public water system in the United States. Additionally, in 1799 Philadelphia created the Lazaretto Quarantine Station, the precursor to Ellis Island.

Objectives

The lessons in this unit are primarily designed to use in fifth and eighth grade American history classes. The activities clearly reflect a multidisciplinary approach whereby history, geography, reading, writing, math, science, government, and culture are integrated. These lessons may be used independently in order to enrich lessons on the early republic or Philadelphia history. There are several lessons that could solely be used for geography, math or science class.

This unit is integrated into the American history curriculum when teaching the early republic or early government. The major concept is for students to understand the yellow fever's impact on the most important city in the United States in 1793, Philadelphia. It was the city where both the state and federal government were located. It was, in fact, the largest city in America.

The main objectives are:

- to use a wide variety of primary source documents, written and graphic
- to examine the response of the community to volunteer efforts during a crisis

- to understand the relation between water and disease
- to become aware that health crises occur throughout the history of Philadelphia
- to understand the differences between primary and secondary sources
- to analyze, organize, and interpret information
- to use latitude and longitude coordinates to find specific locations on a map
- to calculate actual distance on a map using scale
- to make inferences
- to analyze photographs
- to evaluate informational resources for relevance and accuracy
- to identify and analyze historical images
- to synthesize information presented in images and documents
- to compare and contrast the response of the three levels of government to the yellow fever crisis

Strategies

This unit will be taught as an interdisciplinary study, although history is the main discipline. It will also incorporate reading, speaking, listening, art, geography, science, and mathematics. Each lesson begins with a whole group lesson that leads to an exploration of the topic or a document. Students will then work in small groups to complete a task. Each group will be organized with a facilitator, recorder, and reporter.

Most of the lessons will use primary source documents. Students will learn how to explore a variety of documents: a 1793 map, broadside, charts, painting, diary entry, newspaper excerpt, and a political cartoon. After reading the documents, students are asked to analyze, interpret and make conclusions based on the evidence. It is expected that the immersion into the use of primary source materials will enable students to become more thoughtful and critical readers. In addition, the examination of primary source materials will, hopefully, stimulate interest in history.

Classroom Activities

Lesson 1: Map It!

Materials:

- textbook map of the world
- class set of map labeled “The City of Philadelphia, 1793” (see appendix)
- ruler
- class set of “Map Analysis Worksheet” (see appendix)

Time: 1-2 class periods

Procedure:

PART A...

Draw the following chart on the chalkboard. Review locations of Paris, London and the Atlantic Ocean with the class. Have students copy the chart format into their notebook and complete the chart using the political map of the world. Explain that these locations were intricately related to the yellow fever epidemic and politics of the time.

<u>City,Country</u>	<u>Continent</u>	<u>Latitude/Longitude</u>	<u>Miles to Philadelphia</u>
1.Paris,France	_____	_____	_____
2.London,England	_____	_____	_____
3.Port-au-Prince,/Haiti(Santo Domingo)	_____	_____	_____
4.Philadelphia,U.S.A.	_____	_____	_____

PART B....

Orientation is probably needed before using the 1793 map of Philadelphia. Determine north, east, south, and west directions. Determine the location of New Jersey. Have students identify the following important locations in 1793 Philadelphia:

- Delaware and Schuylkill Rivers
- Water Street
- Front Street
- Dock Street
- High (Market) Street
- City Hall
- State House
- Benjamin Rush's house
- Pennsylvania Hospital
- Bush Hill Hospital

PART C...

Distribute copies of the "Map Analysis Worksheet." Have students work in small groups of 2 or 3 to complete the Worksheet on the map "City of Philadelphia, 1793." At the conclusion of the lesson, group reporters should report on their groups' responses to the analysis worksheet. .

Lesson 2: Dr. Benjamin Rush vs. Dr. Jean Deveze

Background:

Benjamin Rush kept a detailed journal of his daily encounters with victims of the plague. He documented intriguing personal observations of people and places in Philadelphia during this time. For weeks he was ill with symptoms of yellow fever while many of his friends and family members died from this devastating disease. The Library Company, located in Philadelphia, holds the Rush Papers.

Rush strongly believed in the more aggressive treatment of bleeding and purging. Bloodletting was the procedure of opening a vein and drawing blood into a bowl. The theory was that the remaining blood would become normal and flow freely through the body. Purging was a dramatic treatment that essentially poisoned the patient so that they would have extreme diarrhea and vomiting. In this way the body would purge itself of the disease. This was a harsh treatment that often saw many patients die from the cure.

Another important doctor remaining in Philadelphia during the yellow fever epidemic was the French doctor, Jean Deveze. His treatment consisted of rest and liquids in order to heal the infected body. This treatment was actually more like the current treatment for a disease.

Materials:

- brief fact sheet for teacher with description of Yellow Fever
www.health.state.ny.us/disease/communicable/yellow_fever/f...
- class set -- excerpt from Dr. Benjamin Rush's prescribed treatment for yellow fever, *Observations Upon the Origin of the Malignant Biliious, or Yellow Fever in Philadelphia, and Upon the Means of Preventing It: Addressed to the Citizens of Philadelphia* (1799)
website: <http://www.geocities.com/bobarnebeck/account93.html>
- class set – excerpt from Jean Deveze's prescribed treatment for yellow fever, *An enquiry Into, and Observations Upon the Causes and effects of the Epidemic Disease, which Raged in Philadelphia from the Month of August Till towards the Middle of December, 1793* (1794)
website: <http://www.geocities.com/bobarnebeck/deveze.html>
- class set of the Document Analysis Worksheet
- account of the yellow fever epidemic
website: <http://xroads.virginia.edu/~cAP/WW/fever.html> (scroll down to section: 1793: Disaster in the Capitol)

Time: 1-2 periods

Procedure:

1. The teacher should set the stage for this activity by reading aloud the account from 1793 as to the treatment of yellow fever.
2. Divide the class into groups of 5-6, smaller if you have less than 30 students. Distribute a copy of the excerpt from Dr. Rush's treatment to half of the groups, and the remaining groups will receive a copy of the excerpt from Dr. Deveze's treatment. Using a group facilitator, have the students read together their document and complete the Document Analysis Worksheet for better understanding of the document.
3. After analyzing the document students are to prepare for a debate on which method was best to treat yellow fever in 1793. Each group should select several members to debate an opposing group. The teacher should pre-arrange the groups making certain there is diverse grouping. Also predetermine which groups will be debating each other.

Lesson 3: The Black Community Responds!

Materials:

- class set of reading (excerpt) “A Short Account of the Malignant Fever..” (1794) author and publisher Mathew Carey

website:

<http://pds.lib.harvard.edu/pds/view/7374219?n=1&imagesize=1200&jp2Res=.25>

- class set of reading “ Of the proceedings of the Coloured People during the awful calamity in Philadelphia, in the year of 1793;...” (1794), Absalom Jones and Richard Allen authors (see appendix)
- class set of Document Analysis Worksheet (see appendix)
website: www.archives.gov/education/lessons/worksheets/index.html (scroll down and click on document analysis worksheet)
- large Venn Diagram on chart paper

Time: 1-2 class periods

Procedure:

1. The teacher presents background information to set the stage for the reading of the two documents. Both documents were published the year after the epidemic. These two documents are cause and effect. The Carey document was published and thereafter the Jones and Allen document was published. Each was printed as a small book or pamphlet.
2. This is a “jigsaw” activity. Divide the class into six groups. Three groups receive a copy of one document while the other three groups receive a copy of the other. Each group is responsible to read a different portion of the reading. Each group will have a reporter, recorder, facilitator, & timekeeper. The facilitator will invite members to read their portion of the document aloud. After the reading, the facilitator should guide their group through the “Document Analysis Worksheet.” The recorder should record the group’s response. This activity should take no longer than 20-25 minutes. All the while the timekeeper monitors the time for the group.
3. At the conclusion of this activity, reporters should give a summary of their section of the document and their group’s responses to the reading.
4. After the group responses, the teacher should chart the students’ opinions of the similarities and differences between the two documents on a Venn Diagram.

Lesson 4: The Highest Death Rate Ever in an American City!

Background:

Materials:

- class set of broadside “Mortality” (1793) (see appendix)
- class set of the three (3) AIDS statistics for Philadelphia, 2008 (see appendix)

- Table 1: National, state, and Local Aids Cases and Mortality as of 6/30/01
- Table 3: Philadelphia AIDS Cases by Age
- Table 9: Adult Cases...Race/Ethnicity and Age
- class set of “Math Activity Worksheet” using the tables of AIDS statistics (see appendix)

Time: 3-4 periods

Procedure:

1. The class should examine the broadside, “Mortality”. Teacher should initiate overall class discussion while examining each section of the document. Focus should be particularly on gender and age. Have students read aloud the poem on the bottom right of the poster.
2. After spending time examining the broadside, have students write a newspaper article, using the 5 W’s, to summarize the information on “Mortality.” This may be completed in partnership with another student or independently.
3. Distribute a copy of the AIDS statistics. These documents have been published by the City of Philadelphia and are the most current statistics available. The entire collection is available at <http://www.phila.gov/Health/units/aaco/pdfs/Final-Dec2007.pdf>. Explore the tables with the students. Compare the information on these current documents with the “Mortality” broadside. Compare and contrast the information and the deaths as a result of each disease.
4. Distribute the Math Activity Worksheet for students to complete. They must use the three tables provided on AIDS statistics to complete the assignment..

Extension Activity: Dr. Walter Reed

Students should use the internet to research information about Walter Reed, his experiments and his discovery that mosquitoes are the carriers of yellow fever.

Lesson 5: Philadelphia 1793: Up Front, Personal and Primary

Materials:

- 10 copies of William Birch print of southeast corner of 3rd and Market Streets (see appendix or http://www.pachs.net/exhibits/web_of_healing/archives/APS/birch.html)
- 16 copies of Elizabeth Drinker’s three-page diary entry...
<http://www.pbs.org/wgbh/ala/part3/3h454t.html>
- 16 copies of the Federal Gazette, September 19, 1793-- newspaper notices of disease & death (see appendix)
- class set of “Photo Analysis Worksheet” (see appendix)

Time: 2-3 class period

Procedure:

1. Students will use three primary documents to “view” Philadelphia in 1793. Begin by distributing the Birch print of 3rd and Market Streets and the Photo Analysis Worksheet. This worksheet was designed for photographs but can easily be used to examine a drawing or painting. Students may work in pairs to explore, discuss and respond to the worksheet prompts.
2. Discuss student responses at the conclusion of the assignment.
3. Divide the class into groups of 4 or 5. Prepare for a “jigsaw” reading and response activity. Distribute the two remaining documents, Drinker’s diary entry and the 9/19/93 newspaper page, whereby each half of the class gets one document. Set up each group with a facilitator, recorder, timekeeper and reporter. Students will read and examine their document and report their findings to their classmates at the conclusion of their group activity. Each group’s reporter shares their findings and opinions.

Lesson 6: A Call for Clean Water: the Fairmount Water Works

Background: As a result of the yellow fever epidemics in Philadelphia throughout the 1790s, the city organized an effort to establish the first public water system in an American city. What resulted was the Fairmount Water Works, built by the famous Frederick Graff and opening in 1822. People came from around the world to view this technological achievement amidst magnificent gardens. It was nothing less than spectacular! Today remnants of the original structure exist and are displayed in an interpretive center. This lesson is a culmination activity, a field trip to the Fairmount Water Works Interpretive Center.

Materials:

- arrange for a lesson, *Building as a Machine: Water for the City* at the Fairmount Water Works (www.fairmountwaterworks.org, 640 Waterworks Drive, Philadelphia, PA 19130

Time: 2 hours

Procedure:

1. In the computer lab at school, students will examine the Fairmount Water Works website and learn the history of the Water Works -- (www.fairmountwaterworks.org/about.php?sec=3)
2. Students will take a field trip to the Fairmount Water Works and have a lesson on how clean water was first brought to the residents of the City of Philadelphia.

Annotated Bibliography

Dickerson, James L. *A Deadly Disease Poised to Kill Again: Yellow Fever*. New York: Prometheus Books, 2006, 271 pp.

A small book with an intriguing title that covers pivotal moments in history related to the yellow fever epidemic. The first chapter of the book explores Philadelphia's plague in 1793. The most interesting chapters are at the end where the author suggests that this plague is not over.

Du Bois, W.E.B. *The Philadelphia Negro, A Social Study (1899)*. New York: Oxford University Press, 2007, 288pp.

This classic is the premier model for the study of the black communities. It examines the Philadelphia black community from 1638 until 1896. This edition was edited by Henry Louis Gates, Jr.

Ershkowitz, Miriam and Joseph Zikmund. *Black Politics in Philadelphia*. New York: Basic Books, Inc. Publishers, 1973, 228 pp.

This is a collection of 10 essays placed in chronological order. W.E.B. DuBois contributes one of the essays along with the epilogue.

Estes, Worth J. and Billy G. Smith (ed.). *A Melancholy Scene of Devastation, The Public Response to the 1793 Philadelphia Yellow Fever Epidemic*. Canton, Massachusetts: Science History Publications, 1997, 198 pp.

This account of the yellow fever epidemic is technical, scholarly, and cumbersome to read. It is a collection of essays published by the College of Physicians and has a specific, scholarly audience.

Flexner, James Thomas. *Doctors on Horseback: Pioneers of American Medicine*. New York: Viking Press, 1938, 359 pp.

This book highlights seven pioneer doctors during the 18th and 19th centuries. Benjamin Rush is examined in the chapter "Saint or Scourge."

Humphreys, Margaret. *Yellow Fever and the South*. New Brunswick: Rutgers University Press, 1992, 226 pp.

As the title suggests, the book's focus is on the disease in the South. However, there is an interesting reference to Benjamin Rush and the yellow fever epidemic in Philadelphia.

Joyce, J. St. George (ed.). *Story of Philadelphia*. Philadelphia: Harry B. Joseph, 1919, 619 pp.

This large volume looks at Philadelphia in an informal, conversational tone. The charming illustrations and black and white photographs are the most interesting part of the part. It does not have an index so locating specific information is time-consuming.

Kelley, Jr., Joseph J. *Life and Times in Colonial Philadelphia*. Harrisburg, PA: Stackpole Books, 1973, 256 pp.

This book examines Philadelphia from its prehistory in 1640 until 1799 through its thirteen essays. It explores Philadelphia as the most cosmopolitan city outside of London. Its major focus is on the cultural history of the city.

McFarland, Joseph. *The Epidemic of Yellow Fever in 1793 and its Influence Upon Benjamin Rush*. New York: Medical Life Press, 1929, 51 pp.

This small journal examines the yellow fever epidemic and the role of Dr. Benjamin Rush.

Miller, Jacqueline C. "The Wages of Blackness: African American Workers and the Meanings of Race during Philadelphia's 1793 Yellow Fever Epidemic." *Pennsylvania Magazine of History and Biography*, Vol. CXXIX, No. 2, April, 2005.

This is a fascinating examination of race during the 1793 epidemic in Philadelphia and the creation of racial distinctions and characterizations which often promoted a class agenda.

Miller, Randall M. and William Pencak (eds.). *Pennsylvania: A History of the Commonwealth*. University Park: The Pennsylvania State University Press, 2002.

This huge volume contains everything anyone would want to know about Pennsylvania. The documents, illustrations, photographs and colored pages of famous artwork by Pennsylvanians make it a very worthwhile companion for a history teacher, 609 pp.

Miller, Richard G. *Philadelphia—The Federalist City: A Study of Urban Politics*. Port Washington, New York: Kennikat Press, 1976, 192 pp.

This small book examines post-colonial Philadelphia politics. The author's premise is that Philadelphia politics was like no other due to its large population in the 1790s.

Nash, Gary B. *First City, Philadelphia and the Forging of Historical Memory*. Philadelphia: University of Pennsylvania Press, 2002, 352 pp.

A history of Philadelphia that includes the role of all citizens: African Americans, women, various ethnic groups, the middle class and poor.

Nash, Gary B. *Forging Freedom: The Formation of Philadelphia's Black Community, 1720-1840*. Cambridge: Harvard University Press, 1988, 343 pp.

This well-known text is primarily about the Philadelphia black community but does have information about various ethnic groups paralleling the black experience.

Oberholtzer, Ellis Paxson. *Philadelphia: A History of the City and its People, A Record of 225 Years*. Philadelphia: S.J. Clarke Publishing Co., 1912.

A history of Philadelphia that was cumbersome to read due to its outdated format. There was no index and the chapter titles were not particularly helpful.

Powell, J.H. *Bring Out Your Dead: The Great Plague of Yellow Fever in Philadelphia in 1793*. Philadelphia: University of Pennsylvania Press, 1993, 294 pp.

This reprinted edition of the original 1949 copy is updated with only a new introduction. It is an easy-to-read, comprehensive account of the 1793 yellow fever epidemic with several related illustrations and documents scattered throughout the text.

Scharf, Thomas J. and Thompson Westcott. *History of Philadelphia, 1609-1884*. Philadelphia: L.H. Everts & Company, 1884.

This huge, 1885 three volume collection examines Philadelphia's history in a rather uninteresting fashion but it gains interest from the ways that it reflects the time period in which it was written. It examines the topography, zoology and geology of Philadelphia, areas not usually covered in a history of the city. The illustrations make volume one worthwhile to explore.

Smith, Philip Chadwick Foster. *Philadelphia on the River*. Philadelphia: University of Pennsylvania Press, 1986, 176 pp.

This extraordinary book was commissioned by the Philadelphia Maritime Museum, now known as the Seaport Museum. It spotlights Philadelphia as a major port over the last three hundred years, a fact that is lost on most Philadelphians.

Thayer, Theodore. *Pennsylvania Politics & the Growth of Democracy, 1740-1776*. Harrisburg, PA: Pennsylvania Historical and Museum Commission, 1953, 234 pp.

Waldman, Steven. *Founding Faith: Providence, Politics, and the Birth of Religious Freedom in America*, New York: Random House, 2008, 277 pp.

This current narrative on the history of religion seeks to show how America's founding fathers created the concept of religious freedom. It discusses the role of religion in America and its inclusion in the first amendment to the Constitution.

Warner, Jr., Sam Bass. *The Private City: Philadelphia in Three Periods of its Growth*. Philadelphia: University of Pennsylvania, 1968, 236 pp.

This classic book explores the history of Philadelphia in three stages. Each stage is shown to contribute to the continuing decline of the city. It is an example of the urban decay of America's large cities.

Weigley, Russell (ed.) *Philadelphia: A 300- Year History*. New York: W.W. Norton & Company, 1982, 842 pp.

This weighty volume traces the political, physical, social, and artistic evolution of Philadelphia over three hundred years. It has more than two hundred prints, drawings and photographs.

Wolf, Edwin and Maxwell Whiteman. *The Jews of Philadelphia From Colonial Times to the Age of Jackson*. Philadelphia: The Jewish Publications Society of America, 1956, 534 pp.

This is a detailed, well-organized, comprehensive narrative about the history of the Jewish population in Philadelphia. Twenty-five percent of the text is made up of endnotes for each chapter.

Adolescent Bibliography

Anderson, Laurie Halse. *Fever 1793*. New York: Scholastic, Inc., 2000, 243 pp.

This historical fiction novel takes the reader through streets of Philadelphia in 1793 and the yellow fever epidemic. The young protagonist is a fourteen-year old girl who contracts the disease, 243 pp.

Fleischman, Paul. *Path of the Pale Horse*. New York: HarperCollins Publishers, 1983, 144 pp.

This historical fictional novel is best for ages eleven and over. The main character is an apprentice to a doctor who serves the community during the yellow fever in Philadelphia. It is full of adventure that may interest boys more than girls.

Murphy, Jim. *An American Plague: the True and Terrifying Story of the Yellow Fever Epidemic of 1793*. New York: Scholastic, Inc., 2003, 139 pp.

This was a most interesting and comprehensive nonfiction book on the epidemic of 1793. It has a lively format of text, illustrations, and documents.

Websites

- <http://www.geocities.com/bobarnebeck/history.html>
- <http://www.eyewitnesstohistory.com/yellowfever.htm>
- <http://ocp.hul.harvard.edu/contagion/yellowfever.html>
- <http://www.philadelphia-reflections.com/blog/481.htm>
- <http://pds.lib.harvard.edu/pds/view/7374219?n=1&imagesize=1200&jp2Res=.25>
- http://www.pbs.org/wgbh/amex/fever/peopleevents/e_philadelphia.html
- <http://www.philadelphiahistory.org/akm/lessons/yellowFever/>
- <http://www.geocities.com/bobarnebeck/account93.html>

- <http://docsouth.unc.edu/neh/allen/allen.html>

Appendices-Standards

Standards

Pennsylvania State Academic Standards

Social Studies Standards Grade Five

8.1.5

- A. Understand chronological thinking and distinguish between past, present and future Time
- B. Explain and analyze historical sources
- C. Explain the fundamentals of historical representations
- D. Describe and explain historical research

8.2.5 Pennsylvania History

- B. Identify and explain primary documents, material artifacts and historic sites important in Pennsylvania history from Beginnings to 1824

8.3.5 United States History

- B. Identify and explain primary documents, material artifacts, and historic sites important in United States history from Beginnings to 1824
- C. Explain how continuity and change has influenced United States history from Beginnings to 1824

8.4.5 World History

- B. Identify and explain important documents, material artifacts and historic sites in world history
- C. Identify and explain how continuity and change has affected belief systems, commerce and industry, innovations, settlement patterns, social organizations, transportation and women's roles in world history

Geography Standards

7.1.5 Basic

- B. Identify and locate places and regions

Literacy Standards

1.1 Learning to Read Independently

- A. Establish the purpose for reading a type of text
- B. Select texts for a particular purpose using the format of the text as a guide
- D. Identify the basic ideas and facts in text using strategies
- E. Acquire a reading vocabulary by correctly identifying and using words

F. Identify and understand the meaning of and use correctly key vocabulary from various subject areas

G. Demonstrate after reading an understanding and interpretation of both fiction and nonfiction text

1.2 Reading Critically in all Areas

A. Read and understand essential content of informational texts and documents in all academic areas

1.3 Reading, Analyzing and Interpreting Literature

F. Read and respond to fiction and nonfiction

1.4 Types of Writing

B. Write multi-paragraph informational pieces

1.6 Speaking and Listening

A. Listen to others

C. Speak using skills appropriate to formal speech situations

D. Contribute to discussions

E. Participate in small and large group discussions and presentations

1.7 Characteristics of the English language

C. Identify word meanings that have changed over time

1.8 Research

B. Locate information using appropriate sources and strategies

Standards for the Arts and Humanities

9.2.5 Historical and Cultural Contents

A. Explain the historical, cultural and social context of an individual work in the arts

B. Relate works in the arts chronologically to historical events

C. Relate works in the arts to varying styles and genre and to the periods in which they were created

D. Analyze a work of art from its fictional and cultural perspective

F. Know and apply appropriate vocabulary used between social studies and the arts and humanities

G. Relate works in the arts to geographic regions

9.3.3 Critical response

A. Identify critical processes in the examination of works in the arts and humanities

B. Describe works in the arts comparing similar and contrasting characteristics

9.4.3 Aesthetic Response

A. Identify uses of expressive symbols that show philosophical meanings in works in the arts and humanities

Standards for Mathematics

2.1 Numbers, number Systems, and Number relationships

D. Use models to represent fractions and decimals

2.2 Computation and Estimation

D. Demonstrate the ability to round numbers

E. Determine through estimation the reasonableness of answers to problems involving addition, subtraction, multiplication and division of whole numbers

2.5 Mathematical Problem Solving and Communication

C. Show ideas in a variety of ways, including words, numbers, symbols, pictures, charts, graphs, tables, diagrams, and models

2.6 Statistics

A. Organize and display data using pictures, tallies, tables, charts, bar graphs, and circle graphs

B. Describe data sets using mean, median, mode, and range

E. Construct and defend simple conclusions based on data

2.11 Concepts of Calculus

A. Make a comparison of numbers

C. Identify maximum and minimum

Endnotes

¹ Estes, J. Worth. *A Melancholy Scene of Devastation*, p. 10.

² Kelley, Joseph J. *Life and Times in Colonial Philadelphia*, p. 94.

³ Murphy, Jim. *An American Plague*, p. 75.

⁴ Dickerson, James. *Yellow Fever*, p. 24.

⁵ *ibid*, p.24.